

**Instructor Contact Information:**

Dr. Nancy Juhn ([njuhn@utdallas.edu](mailto:njuhn@utdallas.edu))

JO 3.120

Office hours: Thursday 1:00 – 3:00 PM and by appointment

**Teaching Assistant:**

Conrad Corretti ([cxc132630@utdallas.edu](mailto:cxc132630@utdallas.edu))

GR 4.704

Office hours: TBA

**Course Description:**

This course is designed to introduce students to basic statistical methods for the design and analysis of psychology experiments. Subject areas include: measurement, graphs, descriptive statistics (e.g., mean, median, mode, variance, standard deviation), distributions (e.g., normal,  $t$ , Chi-square,  $F$ ), bivariate correlation and regression, multiple correlation and regression, inferential statistics (e.g., hypothesis testing, sources of error), analysis of variance designs (e.g., between subjects and repeated measures, factorial designs),

**Student Learning Objectives:**

After completing the course, students should be able to:

1. Describe how different research designs address different types of questions and hypotheses.
2. Articulate strengths and limitations of various research designs.
3. Identify the independent and dependent variables in an experimental design.
4. Compute and interpret descriptive statistics (central tendencies, variability, standardized scores) as well as inferential statistical tests (ANOVA, multiple correlation and regression).
5. Distinguish between statistical significance and practical significance.
6. Recognize and interpret an interaction between factors.
7. Write experimental results in APA format.

**Required Textbook and Software Programs:**

1. Aron, Aron and Coups, Statistics for Psychology, 6<sup>th</sup> Edition, Pearson Prentice Hall.
2. Andy Field, Discovering Statistics Using SPSS, 4<sup>th</sup> Edition, Sage Publications Inc.
3. IBM SPSS Statistics **Premium GradPack 23**

**Recommended Textbook**

Publication Manual of American Psychological Association (APA), 6<sup>th</sup> Edition (Paperback).

**Exams and Assignments:**

***Exams:*** There are two midterm exams and final exam based on lectures, reading, and homework assignments, which will include multiple choice, true/false, short answer, and problem solving questions.

***Homework Assignments and class participation:*** Homework assignments will be posted on eLearning each week. Late Homework will NOT be accepted. If you are not able to attend the class the date that the homework assignment is due, you must turn in your homework via UTD email before 10:00 AM to get the credit. Homework solutions will not be provided, however feedback/ corrections will be given only when you have completed and turned in the homework. The lowest homework grade will be dropped.

**Grading Policy**

Exam 1 will count for 28%, exam 2 will count for 28 % and final exam will count for 34% of the final grade. The homework grade will count for 10% of the final grade.

**Course & Instructor Policies**

**DO NOT MISS AN EXAM!** Make-up exams will be given only if: (a) you were seriously ill and have verifiable documentation from a physician, or (b) you made arrangements prior to the exam to attend an urgent family affair (e.g., funeral).

Please note that the contents and timelines are subject to change at the discretion of the professor.

DATE	LECTURE
8/24	Introduction <b>Research Design Methods</b> Causal versus Correlational Research & Developing Good Research Questions <i>The SPSS Environment: data editor &amp; saving files</i>
8/31	<b>Descriptive Statistics and Exploratory Data Analysis</b> Measures of Central Tendency and Variability Normal distribution and Z scores Distribution of Means of Samples (Sampling distribution) <i>The SPSS: data editor, saving files, and exploring data with graphs</i>
9/7	<b>Inferential Statistics—Parametric Statistics</b> Introduction to Hypothesis Testing The z Test and the t Test <i>The SPSS: t-test and interpreting t-test outputs</i>
9/14	Review for Exam 1
<b>9/21</b>	<b>EXAM 1</b>
9/28	Assumptions Underlying a Parametric Statistic APA-Style Research Reports <b>ANOVA</b> Analysis of Variance (One Factor Design) <i>The SPSS: data file for One-way ANOVA and interpreting ANOVA outputs</i>
10/5	<b>ANOVA</b> Analysis of Variance (Two Factor Design) <i>The SPSS: data file for Two-way ANOVA and interpreting ANOVA outputs</i>
10/12	<b>Inferential Statistics—Nonparametric Statistics</b> Chi-Square <i>The SPSS: transforming data, chi-square test and interpreting chi-square outputs</i>
10/19	<b>Reviewing the Literature</b>
<b>10/26</b>	<b>EXAM 2</b>
11/2	<b>Using Multivariate Design and Analysis</b> Pearson Coefficient Correlation Bivariate Linear Regression <i>The SPSS: Pearson correlation and simple regression</i>
11/9	<b>Multiple Regression</b> Assumptions and Requirements of Multivariate Statistics <i>The SPSS: Multiple regression and interpreting regression outputs</i>
11/16	<b>Multiple Regression and Causal Modeling</b> Categorical predictors <i>The SPSS: transforming data</i>
11/23	<b>Thanksgiving Holiday</b>
11/30	<b>The Meaning of the Level of Significance</b> Power & Effect Size and Decision Errors Statistical versus Practical Significance
<b>12/7</b>	<b>FINAL EXAM</b>

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## Sharing Confidential Information

Students considering sharing personal information in email, in person, or within assignments or exams should be aware that faculty members and teaching/research assistants are required by UT Dallas policy to report information about sexual misconduct to the UT Dallas Title IX Coordinator. Per university policy, faculty have been informed that they must identify the student to the UT Dallas Title IX Coordinator. Students who wish to have confidential discussions of incidents related to sexual harassment or sexual misconduct should contact the Student Counseling Center (972-883-2527 or after hours 972-UTD-TALK or 972-883-8255), the Women's Center (972-883-8255), a health care provider in the Student Health Center (972-883-2747), the clergyperson (or other legally recognized religious advisor) of their choice, or an off-campus resource (i.e., rape crisis center, doctor, psychologist). Students who are sexually assaulted, harassed, or victims of sexual misconduct, domestic violence, or stalking, are encouraged to directly report these incidents to the UT Dallas Police Department at 972-883-2222 or to the Title IX Coordinator at 972-883-2218. Additional information and resources may be found at <http://www.utdallas.edu/oiec/title-ix/resources>.

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## Technical Support

If you experience any issues with your UT Dallas account, contact the UT Dallas Office of Information Technology Help Desk: [assist@utdallas.edu](mailto:assist@utdallas.edu) or call 972-883-2911.

UT Dallas provides eLearning technical support 24 hours a day/7 days a week. The services include a toll free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service. Please use this link to access the UTD eLearning Helpdesk: <http://www.utdallas.edu/elearning/eLearningHelpdesk.html>.

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## Student Conduct and Discipline

The University of Texas System (Regents' Rule 50101) and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UT Dallas online catalogs (<http://catalog.utdallas.edu>).

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the Student Code of Conduct, UTDSP5003 (<http://policy.utdallas.edu/utdsp5003>). Copies of these rules and regulations are available to students in the Office of Community Standards and Conduct, where staff members are available to assist students in interpreting the rules and regulations (SSB 4.400, 972-883-6391) and online at <https://www.utdallas.edu/conduct/>.

A student at the University neither loses their rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating its standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

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## Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrates a high standard of individual honor in his or her scholastic work.

**Academic Dishonesty:** Academic dishonesty can occur in relation to any type of work submitted for academic credit or as a requirement for a class. It can include individual work or a group project. Academic dishonesty includes plagiarism, cheating, fabrication, and collaboration/collusion. In order to avoid academic dishonesty, it is important for students to fully

understand the expectations of their professors. This is best accomplished through asking clarifying questions if an individual does not completely understand the requirements of an assignment.

Additional information related to academic dishonesty and tips on how to avoid dishonesty may be found here: <https://www.utdallas.edu/conduct/dishonesty/>.

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### Copyright Notice

It is the policy of the University of Texas at Dallas to adhere to the requirements of the United States Copyright Law of 1976, as amended, (*Title 17, United States Code*), including ensuring that the restrictions that apply to the reproduction of software are adhered to and that the bounds of copying permissible under the fair use doctrine are not exceeded. Copying, displaying, reproducing, or distributing copyrighted material may infringe upon the copyright owner's rights. Unauthorized distribution of copyrighted material, including unauthorized peer-to-peer file sharing, may subject students to appropriate disciplinary action as well as civil and criminal penalties. Usage of such material is only appropriate when that usage constitutes "fair use" under the Copyright Act. For more information about the fair use exemption, see <http://copyright.lib.utexas.edu/copypol2.html>. As a UT Dallas student, you are required to follow UT Dallas' copyright policy (UTDPP1043 at <http://policy.utdallas.edu/utdpp1043>) and the UT System's policy, UTS107 at <http://www.utsystem.edu/board-of-regents/policy-library/policies/uts107-use-copyrighted-materials>.

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### Email Use

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. All official student email correspondence will be sent only to a student's UT Dallas email address and UT Dallas will only consider email requests originating from an official UT Dallas student email account. This allows the University to maintain a high degree of confidence in the identity of each individual's corresponding via email and the security of the transmitted information. The University of Texas at Dallas furnishes each student with a free email account that is to be used in all communication with university personnel. The Office of Information Technology provides a method for students to have their UT Dallas mail forwarded to other email accounts. To activate a student UT Dallas computer account and forward email to another account, go to <http://netid.utdallas.edu>.

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### Class Attendance

Regular and punctual class attendance is expected. Students who fail to attend class regularly are inviting scholastic difficulty. Absences may lower a student's grade where class attendance and class participation are deemed essential by the instructor. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes.

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### Withdrawal from Class

The administration at UT Dallas has established deadlines for withdrawal from any course. These dates and times are published in the Comet Calendar (<http://www.utdallas.edu/calendar>) and in the Academic Calendar <http://www.utdallas.edu/academiccalendar>. It is the student's responsibility to handle withdrawal requirements from any class. In other words, a professor or other instructor cannot drop or withdraw any student unless there is an administrative drop such as the following:

- Have not met the prerequisites for a specific course
- Have not satisfied the academic probationary requirements resulting in suspension
- Office of Community Standards and Conduct request
- Have not made appropriate tuition and fee payments
- Enrollment is in violation of academic policy
- Was not admitted for the term in which they registered

It is the student's responsibility to complete and submit the appropriate forms to the Registrar's Office and ensure that he or she will not receive a final grade of "F" in a course if he or she chooses not to attend the class after being enrolled.

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### **Student Grievance Procedures**

Procedures for student grievances are found in university policy UTDSP5005 (<http://policy.utdallas.edu/utdsp5005>). In attempting to resolve any student grievance regarding disputes over grades, application of degree plan, graduation/degree program requirements, and thesis/and dissertation committee, adviser actions and/or decisions, evaluations, and/or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originated.

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### **Incomplete Grade Policy**

As per university policy, incomplete grades may be given, at the discretion of the instructor of record for a course, when a student has completed at least 70% of the required course material but cannot complete all requirements by the end of the semester. An incomplete course grade (grade of 'I') must be completed within the time period specified by the instructor, not to exceed eight (8) weeks from the first day of the subsequent long semester. Upon completion of the required work, the symbol 'I' may be converted into a letter grade (A through F). If the grade of Incomplete is not removed by the end of the specified period, it will automatically be changed to F.

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### **AccessAbility Services**

It is the policy and practice of The University of Texas at Dallas to make reasonable accommodations for students with properly documented disabilities. However, written notification from the Office of Student AccessAbility (OSA) is required. If you are eligible to receive an accommodation and would like to request it for this course, please discuss it with your professor and allow one week advance notice. Students who have questions about receiving accommodations, or those who have, or think they may have, a disability (mobility, sensory, health, psychological, learning, etc.) are invited to contact OSA for a confidential discussion. OSA is located in the Student Services Building, SSB 3.200. They can be reached by phone at 972-883-2098, or by email at [studentaccess@utdallas.edu](mailto:studentaccess@utdallas.edu).

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### **Religious Holy Days**

The University of Texas at Dallas will excuse a student from class or other required activities, including examinations and travel time for the observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, of the *Texas Tax Code*.

Students are encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment.

Excused students will be allowed to take missed exams or complete assignments within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the President of UT Dallas or from the President's designee. The chief executive officer or designee must take into account the legislative intent of *Texas Education Code* 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.